

Amendments to the Specification

Kindly amend the specification as follows:

Page 1, between the title and the heading "**BACKGROUND OF THE INVENTION**", insert

--CROSS REFERENCE TO RELATED APPLICATIONS

This is a divisional application of application Serial No. 09/584,549, filed June 1, 2000, which is hereby incorporated by reference in its entirety for all purposes.--

Please replace the abstract with the following amended abstract:

The transposition circuit ~~comprises~~ includes N input terminals (where N is an integer of 2 or greater) and N output terminals. This transposition circuit is configured such that when N packets of data for each matrix row are inputted in parallel to the corresponding input terminals, N packets of data are ~~outputted~~ output in parallel for each matrix column from the corresponding output terminals. This transposition circuit generates data packets arranged as a transposed matrix and obtained from data packets in the form of an N x N matrix by interchanging the rows and columns of the original matrix.